of contiguous segments, as long as each segment would be efficiently mineable and the total proposed area constitutes a logical mining unit.

(d) In describing the area, the applicant must present the geodetic coordinates of the points defining the boundaries referred to the World Geodetic System (WGS) Datum. A boundary between points must be a geodesic. If grid coordinates are desired, the Universal Transverse Mercator Grid System must be used.

§ 971.502 Conservation of resources.

(a) If the Administrator establishes terms, conditions and restrictions relating to conservation of resources, he will employ a balancing process in the consideration of the state of the technology being developed, the processing system utilized and the value and potential use of any waste, the environmental effects of the recovery activities, economic and resource data, and the national need for hard mineral resources.

(b) The application must set forth how the applicant's proposed method of collecting nodules will conserve resources by providing for the future opportunity for commercial recovery of the unrecovered balance of the resources in the proposed permit area. Although preliminary and subject to change, the discussion must include a plan for the chronology of areas to be mined. This is needed in order for the Administrator to determine if selective mining, expected to be carried out in the early years to improve cash flow, is part of a long range recovery plan.

(c) If the applicant proposes a refining process that does not include the use of manganese in a productive manner, it may not render the manganese unavailable to future users by dispersing the tailings over a vast area unless such a scheme is necessary for the financial practicability of the commercial recovery activities of the applicant. A permittee must advise the Administrator in the annual report of the location, composition and quantity of manganese in tailings which remain after processing. Should national needs for manganese develop during the duration of a permit, e.g., in case of national emergency, the Administrator may cancel the exception granted involving dispersion of tailings. Applicants seeking an exception would be required to demonstrate how and in what time frame their commercial recovery processing activities could be modified to respond to new national needs.

§ 971.503 Diligent commercial recovery.

(a) Each permittee must pursue diligently the activities described in its approved commercial recovery plan. This requirement applies to the full scope of the plan, including environmental safeguards and monitoring systems. Permit TCRs will require periodic reasonable expenditures for commercial recovery by the permittee, taking into account the size of the area of the deep seabed to which the recovery plan applies and the amount of funds estimated by the Administrator to be required to initiate commercial recovery of hard mineral resources within the time limit established by the Administrator. However, required expenditures will not be established at a level which would discourage commercial recovery or operational efficiency.

(b) To meet the diligence requirement, the applicant must propose to the Administrator an estimated schedule of activities and expenditures pursuant to § 971.203(b)(2). The schedule must show, and the Administrator must be able to make a reasonable determination, that the applicant can reasonably develop the resources in the permit area within the term of the permit. There must be a reasonable relationship between the size of the recovery area and the financial and technological resources reflected in the application. The permittee must initiate the recovery of nodules in commerical quantities within ten years of the issuance of the permit unless this deadline is extended by the Administrator for good cause.

(c) Once commercial recovery is achieved, the permittee must, within reasonable limits and taking into consideration all relevant factors, maintain commercial recovery throughout the period of the permit. However, the Administrator will, for good cause shown, authorize temporary suspension

of commercial recovery activities. The duration of any suspension will not exceed one year, unless the Administrator determines that conditions justify an extension of the suspension.

(d) Ultimately, the diligence requirement will involve a retrospective determination by the Administrator, based on the permittee's reasonable conformance to the approved recovery plan. This determination, however, will take into account the need for some degree of flexibility in a recovery plan. It also will include consideration of the needs and stage of development of the permittee based on the approved recovery plan; legitimate periods of time when there is no or very low expenditure; and allowance for a certain degree of flexibility for changes encountered by the permittee in market conditions or other factors.

(e) The permittee must submit a report annually reflecting its conformance to the schedule of activities and expenditures contained in the permit and its associated recovery plan. In case of any changes requiring a revision to an approved permit and recovery plan, the permittee must advise the Administrator in accordance with § 971.413.

Subpart F—Environmental Effects

§ 971.600 General.

The Act contains several provisions which relate to environmental protection. For example, section 105(a)(4) requires that, before the Administrator may issue a commercial recovery permit, he must find that the commercial recovery proposed in the application cannot reasonably be expected to result in a significant adverse environmental effect. In addition, each permit issued must contain TCRs which prescribe actions the permittee must take in the conduct of commercial recovery activities to assure protection of the environment (section 109(b)). The Act also provides for modification by the Administrator of any TCR if relevant data and information indicate that modification is required to protect the quality of the environment (section 105(c)(1)(B)). The Administrator also may order an immediate suspension or modification of activities (section 106(c)), or require use of best available technologies (section 109(b)), to prevent a significant adverse environmental effect. Furthermore, each permit issued under the Act must require the permittee to monitor the environmental effects of commercial recovery activities in accordance with guidelines issued by the Administrator, and to submit information the Administrator finds necessary and appropriate to assess environmental effects and to develop and evaluate possible methods of mitigating adverse effects (section 114).

§ 971.601 Environmental requirements.

Before issuing a permit for the commercial recovery of deep seabed hard mineral resources, the Administrator must find that:

(a) The issuance of a permit cannot reasonably be expected to result in a significant adverse environmental effect, or, if there is insufficient information to make that determination, that no irreparable harm will result during a period when monitoring of commerical recovery is undertaken to gather sufficient information in order to determine the potential for or occurrence of any significant adverse environmental effect. In examining this issue, NOAA will give consideration to the following Ocean Discharge Criteria of the Clean Water Act (40 CFR part 125, subpart M), as they may pertain to discharges and other environmental perturbations related to the commercial recovery operations:

(1) The quantities, composition and potential for bioaccumulation or persistence of the pollutants to be discharged;

(2) The potential transport of such pollutants by biological, physical or chemical processes;

(3) The composition and vulnerability of the biological communities which may be exposed to such pollutants including the presence of unique species or communities of species, the presence of species identified as endangered or threatened pursuant to the Endangered Species Act, or the presence of those species critical to the structure or function of the ecosystem such as those important for the food chain;